CLAIMS:

1. A process comprising

coating a pipe with a coating material comprising one or more pulverulent fusible polymers to form a coated pipe having a polymer coating,

melting the polymer coating to form a pipe having smooth melt coating, and

cooling to form a pipe having a hardened coating,

wherein the pipe is not treated with chromate and

wherein melting comprises heating with a medium frequency induction coil.

2. The process as claimed in claim 1, wherein the coating material comprises a polyamide.

3. The process as claimed in claim 1, wherein the coating material comprises at least one of nylon-11 or nylon-12.

4. The process as claimed in claim 1, wherein the coating material comprises nylon-12 in the form of a precipitated powder.

5. The process as claimed in claim 1, wherein the hardened coating has a thickness of from 50 to 1,000 μm and a mean deviation of thickness does not exceed 30%.

6. The process as claimed in claim 1, wherein the hardened coating has a thickness of from 50 to 300 μm and a mean deviation of thickness does not exceed 30%.

7. The process as claimed in claim 1, wherein the hardened coating has a thickness of from 50 to 300 μm and a mean deviation of thickness does not exceed 20%.

8. The process as claimed in claim 1, further comprising

applying a primer to a pipe to form a primed pipe and baking the primed pipe.

9. The process as claimed in claim 8, wherein the primed pipe is baked with a medium-frequency induction coil.

10. The process as claimed in claim 8, wherein the primer comprises a solvent, and baking comprises evaporating the solvent.

11. The process as claimed in claim 10, further comprising

dissipating the evaporated solvent with a radial fan.

12. The process as claimed in claim 1, wherein the pipe is coated with the coating material in a fluidized-bed coating basin comprising a medium-frequency induction coil incorporated in said fluidized-bed coating basin.

13. The process as claimed in claim 12, wherein the fluidized-bed coating basin further comprises an air flush system positioned above the pipe and one or more metal flow-guide panels positioned below the pipe.

14. The process as claimed in claim 1, further comprising

preheating the pipe with a medium-frequency induction coil before coating the pipe with the coating material.

15. The process as claimed in claim 1, further comprising

smoothing the coated pipe having a polymer coating by heating with a medium-frequency induction coil before melting the polymer coating.

16. The process as claimed in claim 1, further comprising

applying an adhesion promoter to the pipe, where the adhesion promoter is in the form of a suspension, a solution or a powder.

17. The process as claimed in claim 1, further comprising

pre-cooling the pipe having a smooth melt coating with an air flush system before cooling with water to form the pipe having a hardened coating.

18. The process as claimed in claim 8, further comprising

cleaning the pipe before applying the primer.

19. The process as claimed in claim 1, wherein only the external surface of the pipe is coated.

20. A pipe coated by the process as claimed in claim 1, comprising a primer layer and a polymer coating layer comprising a fusible polymer.

21. A pipe coated by a chromate-free process, comprising a primer layer and a polymer coating layer applied in a fluidized-bed coating process.